iCITE101 Tag Exciter

- Real-time chokepoint detection for enhanced location and identification of assets and personnel
- ATEX and IECEx certified
- Robust design - IP66 fully ruggedised
- Easy to install
- Wi-Fi compliant
- Wide range of antenna options

The iCITE101 brings the latest AeroScout exciter technology into hazardous areas and harsh environments. Exciters provide robust and sophisticated RFID detection capabilities, using Extronics Advance Tags that can be accurately located in real time by the system. Exciters transmit low frequency (LF) signals to trigger active RFID Tags as they pass through a chokepoint or as they approach the Exciter. The Tags in turn transmit messages to compatible Access Points in the Tag's range. This provides an instant acknowledgment of an event confirming that a tagged asset has passed through a gate, doorway, or some other well-defined area. These advanced detection capabilities have proven usability, dependability, and scalability, as well as flexibility to enable a wide variety of valuable applications for many industries to streamline business processes and improve operational efficiency.

Automatic inventory management

Logistics organisations can update inventory records by automatically determining which assets are within the respective defined areas, thus ensuring real-time knowledge of inventory levels without manual checks or barcode scanning.

Logistics real-time alerts

Based on the locations of assets, organizations across industries can use Exciters to trigger automated events and alerts. For example, in a shipping yard, notifications can be initiated when vehicles pass through its gates to enter or exit.

Process control

Manufacturing companies can track the location of equipment, carriers, and even the work-in-process (WIP) inventory during a production cycle. This provides a real-time view of production items, both in terms of type and quantity, which have progressed through each step in the process, thus streamlining the manufacturing operations.

Theft prevention

Organizations with expensive and mission-critical equipment can Tag valuable assets that are intended to remain within a specified area. The AeroScout system can track the location of such tagged assets and trigger an alert when they pass through an exit point or enter a restricted area.

Security applications

Exciters can be installed to improve the safety level of employees and customers. When installed at the entrances of restricted areas, Exciters trigger alerts if unauthorised persons attempt to enter. For example, instant notifications can be sent if someone comes in proximity of a restricted area on an oil rig.

Key features

- **Tag behaviour modification:** Tag behaviour can be changed (activated or deactivated) when it comes in the proximity of an Exciter. For example, a Tag can be switched off when it leaves a defined area, thus extending its battery life. In addition, when the Tag enters a new physical space, its transmission rate can be modified either for a temporary period or for an indefinite time.

- **Message programming functions:** Exciters have the ability to store messages on the Tag for subsequent transmission. The message transmission can be triggered by other Exciters, enabling sophisticated process control functions.

- **Multiple cabling options:** Exciters can support Power over Ethernet (PoE) or standard Ethernet to enable centralized programming, monitoring and updates by the AeroScout Engine. In addition, Exciters can work in an offline mode disconnected from the network, thus eliminating the need for a physical network feed. In the offline mode, remote configuration and monitoring is not enabled.

- **Chaining:** in an area where the required LF coverage exceeds the capacity of one Exciter, multiple Exciters can be connected together for complete and precise coverage of areas such as large gates and racks.

- **Specific location detection:** Exciters enable enterprises to locate assets precisely to a specific shelf, rack, room, bay or work cell. They can also assist in difficult searches for specific assets by making the Tag in question identify itself with a specific LED indication.

Specification

Certification	ATEX II 2GD Ex e mb IIC T6..T4 Gb (T4 Ta = -20C to +80C, T5 Ta = -20C to +60C, T6 Ta = -20C to +40C) Ex e mb IIIC T100°C Db -20°C ≤ Tamb ≤ 80°C
Range	Adjustable from 0.5m (20in) up to 6.5m (20ft)
Dimensions	250 x 250 x 120mm (9.85 x 9.85 x 4.72in)
Weight	Approx 7.7kg (17lbs)
Housing	Black anti-static GRP enclosure, IP66
Management	Configured remotely with System Manager software
Electrical connection	Screw terminals
Cable entry	3 x M20 entries, suitable for Ex e glands
Environmental	Operating temperature: -20°C to +60°C (-4°F to 140°F) Storage temperature: -20°C to +80°C (-4°F to 176°F) Humidity: 0 to 95%, non-condensing
LF channel	125kHz ASK modulation Field intensity limits: 37.3dBµA/m at 10m (ETSI)
Voltage supply	PoE (802.3af): 48VDC Input voltage: 48VDC Output voltage: 48VDC
Radio certification	ETSI 300.328, 300-330, ETSI 301-489

Event and alert manager:

- Trigger configurable event types – entrance / exit, overflow shortage, dwell / absence, temperature, humidity, motion, par level, tag battery level, and more

- Wizard-based event creation tool requires no coding » External alerts to Web Services, email, http post, JMS queue, phones, pagers, and XML

- Enterprise-grade Complex Event Processing (CEP) technology capable of processing tens of thousands of events simultaneously